EXTENSIONS OF REMARKS

HIGH–TECHNOLOGY RESURGENCE IN LOS ANGELES OFFERS PROMISE OF ECONOMIC GROWTH

HON. JANE HARMAN
OF CALIFORNIA
IN THE HOUSE OF REPRESENTATIVES

Monday, July 22, 1996

Ms. HARMAN. Mr. Speaker, for some time it has been clear to me that America can no longer afford to maintain two separate industrial bases—one for defense and another for commercial products. The cost and inefficiencies are too great, and we are finally beginning to learn that each sector can leverage the advances of the other.

The key to leveraging is dual-use partnerships, which have been at the core of several small Federal research programs like the Advanced Technology Program, the Technology Reinvestment Program and the Manufacturing Extension Partnership—each of which has been targeted for reduced funding, if not elimination, in this Congress.

Recently, Joel Kotkin contributed an article to the Los Angeles Times noting how recent trends in dual-use research are restoring strength and vibrancy to the economy of southern California. Several of the examples are the result of changing policies and procurement patterns in the U.S. military. More importantly, all are examples of how businesses in southern California are taking advantage of the rich defense industry heritage and the continuing high quality of workers—an example that may be a model for other parts of the country.

I commend the article to my colleagues:

[From the Los Angeles Times, July 7, 1996]

THE ''SILVER'' AGE OF STATE'S DEFENSE-AEROSPACE ECONOMY

(By Joel Kotkin)

The end of the Cold War seemed to mark the demise of Southern California's defense and aerospace-driven ''golden age,'' throwing the state into its worst recession in decades. But the region's heritage as the world leader in military and space technology is now poised to boost its burgeoning information age economy.

Indeed, the announcement on Tuesday that Lockheed-Martin will build the new X–33 reusable spacecraft at its Palmdale facility, creating about 2,000 new jobs, fits into a wider picture of a restored Southland aerospace and defense industry.

Between the late 1980s and last year, roughly 55%, or 175,000, California aerospace-related workers lost their jobs. This year, despite widespread predictions of 20,000 additional layoffs, the industry seems to have stabilized; economist Stephen Levy sees the once-reeling sector creating net new jobs through 1998.

Nowhere will this reversal of fortune be more positively felt than in the Los Angeles area—where 80% of all the state's aerospace job losses occurred, including 50,000 in 1993 alone. Even as the two other pegs of the local economy—the ''creative industries'' and international trade—have grown robustly, the depth of the defense-aerospace downturn seriously slowed growth in the critical high-technology sector.

The recent recovery in aerospace and defense electronics is critical because it has the potential to restore the region's once-strong reputation as a center for technology development. During the economic free-fall of the early 1990s, Southern California was viewed nationally—and often viewed itself—as a technological laggard behind such areas as the Bay Area, Seattle and even Utah. This image of Southern California as little more than a ''tinsel town'' surrounded by Third World misery hurt the recruitment and promotional efforts of technology-related companies in such disparate fields as computer software and multimedia.

But today, with the resurgence in high-tech aerospace and defense electronics, Southern California's position as a leading edge economic region is being restored. Los Angeles County now has an annual job growth rate equal to Seattle and higher than San Francisco—both widely regarded as boomtowns. For the first time in years, L.A. County's employment engine is running hotter than that in suburban Orange County and the Inland Empire.

The improving defense-aerospace picture stems, in part, from changing federal procurement patterns, growing diversification into commercial fields by local defense companies and increased aircraft sales. Perhaps most important, the turn-around reflects a new emphasis in the U.S. military: away from large-scale weapons systems and toward information technologies. This shift represent, in the words of one analyst at the Army War College, ''a revolution in military affairs.''

The military's new direction has played directly to Southern California's strength in defense electronics. It is increasingly clear that the Persian Gulf War, with its reliance on satellites and ''smart'' weapons, represented only the first phase of a continuing ''digitalization'' of military systems—encompassing sophisticated battlefield communications systems, satellites and anti-missile technology.

Engineers and scientists at TRW, for example, are working on a series of advanced systems for the army's elite Force XXI, which is expected to become the model for the new, ''digitized'' army. Among the projects being worked on at TRW, most of whose defense operations are in the South Bay, are a new system of computer communications devices for mechanized forces; a special high-frequency identification system designed to prevent ''friendly fire'' accidents, and laser technologies designed to shoot down incoming missiles from terrorists.

As a result, TRW—a firm that cut roughly 9,000 jobs during the early 1990s—added more than 1,200 last year, largely high-skilled, well-paid workers. And it is planning to add another 1,300 this year. The decision to grow in Southern California is due largely to the region's work force—which leads the nation in mathematicians, engineers and skilled technologists. As an overall scientific research center, the Southern California region ranks third nationally, behind only San Francisco and Boston.

''We chose to stay where are—and we have asked the question—because fundamentally the No. 1 driver is the pool of technical talent.'' explains Fred Brown, TRW group vice president for Space and Electronics. More than half of his division's recent hires, he estimates, come from local colleges and universities.

Much the same process can be seen at other key defense firms in Southern California. Rockwell recently added 400 new jobs at its Anaheim Autonetics and Missile Systems plant and Hughes Electronics is expected to add another thousand workers this year. Although this is not the en masse hiring of factory workers that occurred in the 1980s and earlier, it signals a marked improvement in market conditions for the region's scientific, engineering and technical talent.

Contributing much to the improving prospect has been the ability of defense firms, both large and small, to shift technologies into commercial markets. In contrast to the heavily hyped but relatively ineffective government ''conversion'' programs, such as the Calstart electric car effort, Los Angeles' real defense restructuring has been a classically capitalist ''creative destruction''—with the associated dose of pain.

Take TRW's gallium arsenide technology, developed for military use in satellite and communications systems. It now has large new markets in such commercial areas as cellular phones, leading TRW to consider keeping its Redondo Beach foundry on 24-hour shifts to meet both commercial and military demand.

Similarly, Hughes, based in El Segundo, has focused on its satellite technology and its successful Direct TV enterprise, turning the defense firm into something of a telecommunications superpower. Defense has dropped from nearly two-thirds of the company's from nearly two-thirds of the company's revenues in the late 1980s to roughly 40%. Rockwell, another aerospace powerhouse, has cut its dependence on defense spending over the past decade from 50% to 15%. High-tech electronics now account for the largest share of company revenues.

An equally dramatic conversion has taken place among a plethora of smaller technology companies. Nurtured by research monies from the military or NASA, these firms are now shifting into commercial markets.

Particularly promising are a group of companies now using military-derived simulation and image processing technology to enter such growth fields as special effects and educational software. Raj Dutt, President of R&D Laboratories in Culver City, has spent a decade creating advanced satellite systems for the military. Now the same technology can also be used to carry heavy data loads, something of increasing interest to telecommunications and entertainment firms.

Dutt, who expects to boost his nondefense share of business from 10% to nearly half over the next two years, suggests the biggest problem for companies like his may be ''cultural.'' Essentially, defense firms, large and small, must move away from their ultra-metriculous, 8-to-4 culture, to the more fast-paced environment characteristic of the commercial sector. ''We have to learn how to compete in the real world,'' says Dutt, a Caltech-trained physicist.

Yet, like RDL, many smaller defense firms find confronting reality not only necessary, but profitable. Perceptronics, based in Woodland Hills, is now using its warfare-honed

simulation system for such things as electronic training systems for commercial trucking companies. Illusion Inc., a small contractor in Westlake Village, is now taking ''virtual reality'' technology, developed for designing aircraft and military training exercises, into such diverse venues as museums and movie special effects. In each of the past three years, Illusion Inc. has doubled its revenues and expects to expand to 50 employees by 1997, up from its current 20. ''The future for companies like ours,'' said Peter Beale, Illusion Inc.'s chairman, ''is to combine the creative vision of Hollywood with the engineering vision of the defense industry.''

Such new uses for military technology and talents could also prove critical in providing the Southland economy with an important new source of high-wage jobs that lessen its current dependence on the volatile film industry or the always uncertain course of foreign trade. As Southern California begins to harvest the overlooked fruits of its rich defense industry heritage, it may enjoy the broad, diversified economic recovery that many thought could never happen here again.

ENDING STUDENT SUBSIDIES

HON. JOHN J. DUNCAN, JR.

OF TENNESSEE

IN THE HOUSE OF REPRESENTATIVES

Monday, July 22, 1996

Mr. DUNCAN. Mr. Speaker, I recently received a copy of an article that was written by Ross Booher and Kevin W. Jones entitled, ''Ending Student Subsidies''. One young man is currently attending the University of Tennessee Law School, and the other is just entering. Both Ross and Kevin are not only excellent students, but they are citizens who I am certain will contribute greatly to our society and its future.

I request that a copy of this article, ''Ending Student Subsidies'' be placed in the RECORD at this point, so I can call it to the attention of my colleagues and other readers of the RECORD.

[From the Chronicle of Higher Education, Nov. 24, 1995]

ENDING STUDENT SUBSIDIES

(By Ross I. Booher and Kevin W. Jones)

Although college lobbyists apparently have persuaded Congress to abandon plans to eliminate the federal interest subsidy on guaranteed student loans this year, lawmakers are likely to scrutinize the program again in the future as they search for ways to cut wasteful government spending. We urge them to do so. Even though we are students who currently enjoy the benefits of this taxpayer largess, we believe that the interest subsidy should be dropped, American taxpayers spend almost $2.5-billion a year for interest on guaranteed loans while the borrowers are students and for six months after they graduate. The borrowers never repay any of this interest.

We believe that this subsidy amounts to a taxpayer-financed gift to people who neither need it nor deserve it. Eliminating the subsidy would not make student loans or a college education less available, because the loans themselves still could be obtained. Further, the maximum amount that could be borrowed would remain the same; students would not pay any interest while they were in school; and they would continue to have a six-month grace period after graduation before the began repayment. The only change we suggest is that once students begin repayment, they pay all the interest that has accrued. The interest should be added to the student's debt, not to the national debt.

We believe that students, and everyone else, would be better served by a stronger economy. We are willing to ''sacrifice,'' not out of altruism, but because we and everyone else will benefit from a national economy not bogged down by federal debt. According to the U.S. Treasury Department's latest estimates, the federal government is nearly $5-trillion in debt. Unless we cut all but the most-essential spending the interest on the national debt alone will soon consume almost all federal tax revenue. This scenario augurs ill for the schooled and unschooled alike? All federally financed programs would be endangered.

Many who oppose ending the subsidy fear that, without it, students from lower-and even middle-income backgrounds will be unable to afford higher education. This fear is unfounded. Students who are willing to borrow money to pay for college still would be able to do so, but, as the people who benefit from the loan (and the education), they simply would have more to repay after graduation. Isn't it reasonable for the recipient of education to have to pay for it, particularly when the financial rewards of college continue to far outweigh the costs?

The U.S. Department of Education calculates that eliminating the federal interest subsidy would increase the loan repayment of an undergraduate student who chooses to borrow the maximum amount available during his or her undergraduate year by about $69 per month during the standard 10-year repayment period. Even this, the highest possible increase, would easily fit into the budget of most college graduates—who, according to the most recent census data available, earn $1,039 per month more than the average high-school graduate. The vast majority of undergraduates, however, borrow far less than the maximum loan amount, and thus the increases in their payments would be smaller.

What about more-expensive graduate and professional degrees, such as those in medicine and law? Will students be able to afford them without the interest subsidy? Again, the answer is yes, The Department of Education calculates that eliminating the interest subsidy would increase the payments of the average student who receives Ph.D., and who chooses to borrow the maximum amount available, by about $382 per month during the standard 10-year repayment period. This is a great deal of money, but, according to the U.S. Census Bureau, the average Ph.D. recipient earns $3,853 per month and the average recipient of a professional degree earns $4,961 per month. The comparable figures for people with a bachelor's degree and people with a high-school diploma are $2,116 and $1,077, respectively.

Looking at the big picture, those who borrow the maximum among of $138,500 to obtain a doctoral degree enable themselves to earn an average of $1.4-million more during their lifetime than the average high-school graduate. Recipients of a professional degree in fields such as law and medicine earn, on average, a staggering $2.2-million more than the average high-school graduate.

Organizations lobbying to preserve the interest subsidy, such as the American Medical Student Association and the Student Osteopathic Medical Association, point out that, in the years immediately following graduation, many people who earn a graduate or professional degree earn very little relative to the amount of debt they have incurred. According to the A.M.S.A., medical doctors can earn an average of about $2,500 per month during residency training. The A.M.S.A. currently argues that it is difficult to make payments on a $100,000-plus student loan with such a salary.

For this very reason, the government provides the option of temporarily or permanently making payments on a 30-year repayment schedule. This method dramatically lowers monthly payments, by spreading them out over a longer period. When borrowers complete their postgraduate training and begin to realize the financial rewards of their education investment, they may choose to return to the standard 10-year repayment schedule, thus lowering the total interest they will pay. We believe that this option makes eliminating the subsidy relatively painless, even for those whose earnings are not very high immediately after they receive their advanced degree.

Some supporters of the interest subsidy point out that not all jobs requiring a college education pay the Census Bureau's ''average salary.' Wouldn't losing the interest subsidy hurt students who choose to incur student-loan debts and then enter occupations that pay very little? Again, provisions already are in place to address that concern. First, most students now begin repaying their loans six months after they graduate, but longer deferments are granted for a variety of reasons—including unemployment, a return to full- or half-time student status, acceptance of an academic fellowship, and economic hardship. Further, if graduate serve in a public-service position (for instance, as a nurse, public-school teacher, member of the armed forces, or peace Corps or Vista volunteer), their loans may be partially or completely paid by taxpayers—who receive obvious benefits from the graduates' service.

What about students who borrow because they want to attend an expensive private college or university, but then decide to enter a low-paying field not included in the public-service category above? Such students may find that, in a world of limited resources, they cannot always have everything they want: They may have to choose between pursuing a low-paying career and attending an expensive college.

Of course, they may decide that they want to do both badly enough to be willing to take out student loans and accept a 30-year repayment schedule and a lower standard of living. If that is their choice, it should be their responsibility to cope with the consequences, not that of the American taxpayer.

MOLLIE BEATTIE WILDERNESS AREA ACT

SPEECH OF

HON. MICHAEL P. FORBES

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Tuesday, July 16, 1996

Mr. FORBES. Mr. Speaker, on June 27, 1996, we lost Mollie Beattie, a friend and an ally, to a battle with brain cancer. Head of the U.S. Fish and Wildlife Service [USFWS], Mollie worked diligently to preserve our ecosystem and protect it for the future of our Nation. As the first woman to head the USFWS, she worked wonders shrinking budgets while still expanding the Federal refuge system.

A philosophy major at Marymount College in Tarrytown, N.Y. Mollie later found herself involved in an Outward Bound course, through which she rediscovered her love for nature, which led her to a career as an environmental official. Her philosophy on the environment